

**REMARKS/ARGUMENT**

The Final Office Action of August 15, 2008 has been reviewed and the comments therein were carefully considered. The present application includes claims 1-22. Claims 1-22 have been rejected by the Examiner. By this response, independent claims 1, 7, and 13 have been amended to recite in various forms that the trackball device and the imaging system are remote from one another. Further, the independent claims have been amended to recite in various forms that the command remotely transmitted changes a function. No new matter has been introduced into the application. Further, appropriate claims depending from the independent claims have been amended, where necessary, to reflect the changes in the independent. Such systems and methods are not found in the cited art, as explained below, and, thus, for at least these reasons, claims 1-22 should be allowable.

**REJECTIONS UNDER 35 USC § 103(a)**

Claims 1, 3, 5-8, 11, 13-17 and 19, have been rejected under 35 U.S.C. 103(a) as being unpatentable over McCabe et al. (U.S. Patent No. 5,868,676) in view of Goto. (U.S. Patent No. 5,832,323). Claims 1, 7, and 13 are independent claims. The Applicant traverses this rejection for at least the following reasons.

**CLAIMS 1-6**

With respect to claim 1, McCabe relates a system and method to input a variable to calculate maximum velocity in an ultrasound system. A user interface may be used to alter the input of a percentage used in the ultimate calculation of the maximum velocity. A trackball may be used to select the input P in the ultimate calculation of the maximum velocity. (McCabe, col. 8, lns 1-10.)

Thus, the system of McCabe may include a trackball, but that trackball is simply used to adjust input P, a setting, in the exponent of an equation that is used to calculate S, a scale factor which is used to fine tune the maximum velocity curve, rather than to remotely transmitting a functional command directly to the imaging system as recited in the currently amended claim. (See McCabe, col. 7, Ins. 36-40, 59-67.) Thus, in McCabe a setting can be changed in an exponent of an equation, but a function may not be directly changed. Nowhere does McCabe discloses or teach transmitting a command to change a function of the imaging system. Further, as noted by the Examiner, McCabe does not disclose that the trackball generates a command through rotational translation of the trackball motion. Additionally, McCabe does not disclose that the trackball device is remote from the ultra sound system as recited in currently amended claim 1. Further, McCabe does not disclose remotely transmitting the command to the medical diagnostic imaging system.

Goto relates to an information setting apparatus for setting the contents of mode of operation such as the photometric, exposure, or distance measurement of a camera. (See Goto, col. 1, Ins. 6-9.) Goto does not relate to a medical diagnostic imaging system. Furthermore, Goto does not teach or suggest use in a medical diagnostic imaging system environment. Rather, Goto discusses setting information of a camera. (Id.) Goto fails to disclose that the trackball is in a remote trackball device as recited in the presently amended claims. In Goto, the ball is clearly integrated into what the Office Action describes as an imaging system. At least, Figure 4 clearly shows that the ball 110 is in the rear surface of the camera and not remote to the imaging system as recited in the amended claims. (See Goto, col. 17, Ins. 11-16.)

A ball 110 serving as an operation mechanism of the present invention is disposed on the rear surface (front side in Fig. 4) of the camera 101. As shown in Fig. 5, the ball 110 is disposed such that a thumb 107 of the right hand is naturally placed when the camera 101 is held with the right hand.

(See Goto, col. 17, lns. 11-16.) See also Fig. 14a, 22A, 24, 25, 31 and 41.

Further, Goto does not disclose that the trackball in the remote handheld device remotely transmits the command to the imaging device. As shown above, the trackball is integral to the camera and not remote as recited in the currently amend claims. Accordingly, the command cannot be remotely transmitted from a remote handheld trackball device. Fig. 23 shows the mechanism of the trackball in the camera.

Thus, for at least these reasons, Applicant submits that neither McCabe nor Goto, taken alone or in theoretical combination, teaches or reasonably suggests all the limitations of claim 1. Claims 2-6 are dependent claims which ultimately depend from independent claim 1 and should be allowable at least for the reasons stated.

## **CLAIMS 7-12**

As discussed above, the system of McCabe may include a trackball, but nowhere does McCabe disclose that the trackball device is in a remote handheld device. Further, as discussed above, nowhere does McCabe disclose directly transmitting a command to the imaging system to change a function of the imaging system. Further, as noted by the Office Action, McCabe does not disclose that the trackball controls the imaging system based on rotational motion of the trackball.

Currently amended claim 7 recites a trackball that controls a diagnostic imaging system is based on the rotational movement of the trackball. Further, currently amended claim 7 recites that the handheld trackball device comprises a transmitter for remotely transmitting a command from a remote handheld trackball device to a diagnostic imaging system based on rotational motion of the trackball. As discussed above, Goto does not disclose a trackball in a remote

handheld trackball device. Rather, in Goto, the trackball device is integral to the camera, for controlling a display imaging system based on the rotational movement of the trackball

Thus, for at least these reasons, the Applicant submits that neither McCabe nor Goto, taken alone or in theoretical combination, teaches or reasonably suggests all the limitations of claim 7. Claims 8-12 are dependent claims which ultimately depend from independent claim 7 and should be allowable at least for the reasons stated.

### **CLAIMS 13-22**

As discussed above, the system of McCabe may include a trackball, but nowhere does McCabe disclose that the trackball device is in a remote handheld device and remotely transmits a command to directly change a function in the medical diagnostic imaging system. Further, as noted by the Office Action, McCabe does not disclose that the trackball controls the imaging system based on rotational motion of the trackball.

Currently amended claim 13 recites a trackball that controls a diagnostic imaging system is based on the rotational movement of the trackball. Further, currently amended claim 13 recites that the handheld trackball device comprises a transmitter for remotely transmitting a command from a remote handheld trackball device to a diagnostic imaging system based on rotational motion of the trackball. As discussed above, Goto does not disclose a trackball in a remote handheld trackball device. Rather, in Goto, the trackball device is integral to the camera, for controlling a display imaging system based on the rotational movement of the trackball

Thus, for at least these reasons, the Applicant submits that neither McCabe nor Goto, taken alone or in theoretical combination, teaches or reasonably suggests all the limitations of claim 13. Claims 14-22 are dependent claims which ultimately depend from independent claim 7 and should be allowable at least for the reasons stated.

With regard to Goto, as discussed above, Goto does not disclose a remote mousing device for operating a medical diagnostic imaging system based on rotation movement of the moveable portion as recited in claim 13. The trackball disclosed in Goto is not a remote mousing device. In Goto, the trackball is integral to the camera and located on the back of the camera. (See Goto, col. 17, Ins. 12-17.)

Thus, for at least these reasons, the Applicant submits that neither McCabe nor Goto, taken alone or in theoretical combination, teaches or reasonably suggests all the limitations of claim 13. Claims 14-22 are dependent claims which ultimately depend from independent claim 13 and should be allowable at least for the reasons stated.

#### **CLAIMS 2, 12, AND 18**

Claims 2, 12, and 18 have been rejected under 35 U.S.C. 103(a) as being unpatentable over McCabe et al. (U.S. Patent No. 5,868,676) in view of Goto (U.S. Patent No. 5,832,323) and in further review of Gaughan et al. (U.S. Patent No. 5,589, 893).

As discussed above, neither McCabe nor Goto, alone or in combination, teaches or reasonably suggests the limitations of independent claims 1, 7 or 13 from which claims 2, 12 and 18 ultimately depend. Additionally, as noted by the Office Action, neither McCabe nor Goto disclose the added limitations of claims 2, 12, and 18.

Gaughan does nothing to cure the fundamental defects of McCabe and Goto with respect to the previously claimed features. Gaughan has no disclosure of a medical diagnostic imaging system or control of a system through trackball movement to help fill the gaps in McCabe and Goto. Therefore, Applicant respectfully submits that claims 2, 12, and 18 are allowable for at least the reasons stated above.

#### **CLAIMS 4 AND 10**

Claims 14 and 10 have been rejected under 35 U.S.C. 103(a) as being unpatentable over McCabe et al. (U.S. Patent No. 5,868,676) in view of Goto (U.S. Patent No. 5,832,323) and in further view of Chang (U.S. Patent No. 5, 298,919).

As discussed above, neither McCabe nor Goto, alone or in combination, teaches or reasonably suggests the limitations of claims 1 and 7 from which claims 4 and 10 ultimately depend. Additionally, as noted by the Office Action, neither McCabe nor Goto disclose the added limitations of claims 4 and 10.

While Chang discloses a computer mouse, Chang does not disclose or envision the particular arrangement claimed in claims 4 and 10. Chang does nothing to cure the fundamental defects of McCabe and Goto with respect to the previously claimed features. Chang has no disclosure of a medical diagnostic imaging system or control of a system through trackball movement to help fill the gaps in McCabe and Goto. Therefore, Applicant respectfully submits that claim 4 is allowable for at least the reasons stated above.

#### **CLAIMS 9 AND 21-22**

Claims 9 and 21-22 have been rejected under 35 U.S.C. 103(a) as being unpatentable over McCabe et al. (U.S. Patent No. 5,868,676) in view of Goto (U.S. Patent No. 5,832,323) and further in view of Funda et al. (US Patent No. 5,417,210). The Applicant respectfully traverses this rejection for at least the following reasons.

As discussed above, neither McCabe nor Goto, alone or in combination, teaches or reasonably suggests the limitations of claims 7 or 13 from which claims 9 and 21-22 ultimately depend. Additionally, as noted by the Office Action, with respect to claim 9, neither McCabe nor Goto discloses the added limitations of claim 9.

Funda discloses a voice recognition system, but in Funda, unlike the feature claimed in claim 9, the speech recognition system is separate from the other input devices. (See Funda, col. 6, lns. 60-67; col. 7, lns. 1-4.)

Funda does nothing to cure the fundamental defects of McCabe and Goto with respect to the previously claimed features. Funda has no disclosure of a medical diagnostic imaging system or control of a system through trackball movement to help fill the gaps in McCabe and Goto. Therefore, Applicant respectfully submits that claim 9 is allowable for at least the reasons stated above.

With respect to claims 21-22, as noted by the Office Action, with respect to claims 21-22, neither McCabe or Goto disclose the added limitations of claims 21-22. Funda does not cure the fundamental defects of McCabe or Goto. In Funda, the trackball is simply used to move the cursor on the screen rather than to control functionality on the screen. Funda has no disclosure of a medical diagnostic imaging system or control of a system through trackball movement to help fill the gaps in McCabe and Goto. Therefore, Applicant respectfully submits that claims 21-22 are allowable for at least the reasons stated above.

#### **Claim 20**

Claim 20 has been rejected under 35 U.S.C. 103(a) as being unpatentable over McCabe et al. (U.S. Patent No. 5,868,676) in view of Goto (U.S. Patent No. 5,832,323) and further in view of Holmes (US 6,222,526). The Applicant respectfully traverses this rejection for at least the following reasons.

As discussed above, neither McCabe nor Goto alone or in combination, teaches or reasonably suggests the limitations of independent claim 13, from which claim 20 depends.

Additionally, as noted by the Examiner, neither McCabe nor Goto discloses the added limitation of claim 20.

Holmes bears no relation to a medical diagnostic imaging system but instead discusses a hand held ergonomic computer controller. See, e.g., Abstract. While Holmes discloses a trackball mounted in its particular hand held ergonomic computer controller, Holmes does not provide or disclose remedy the many defects found in McCabe and Goto with respect to independent claim 13 and dependent claim 20, including rotational translation of trackball movement into a command for execution at the medical diagnostic imaging system. Therefore, the Applicant respectfully submits that claim 20 is allowable for at least the reasons stated above.

Therefore, the Applicant respectfully submits that the rejections in the non final Office Action have been overcome, and the claims should be allowed over the cited art of record.

### CONCLUSION

In general, the Office Action makes various statements regarding the pending claims and the cited references that are now moot in light of the above. Thus, the Applicants will not address such statements at the present time. However, the Applicants expressly reserve the right to challenge such statements in the future should the need arise (e.g., if such statement should become relevant by appearing in a rejection of any current or future claim).

It is submitted that the present application is in condition for allowance. Applicants respectfully request reconsideration of the pending claims and a finding of their allowability. A notice to this effect is respectfully requested. If the Examiner has any questions or the Applicant can be of any assistance, the Examiner is invited and encouraged to contact the Applicant at the number below.

The Commissioner is authorized to charge any necessary fees or credit any overpayment to the Deposit Account of GTC, Account No. 502401.

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Respectfully submitted,

/Dennis P. Hackett/

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